

Determination of the linear ...

S/191/62/000/011/CO9/019
B101/B186

vacuo and molded glass textolite differ in that the $\Delta l/l_0$ -versus-temperature curve for the latter shows irregularities above 100°C, due to after-hardening of the resin and loss of volatile components (the loss in weight being greater than with vacuum-shaped textolite). Therefore vacuum-shaped glass textolite offers higher heat resistance and mechanical strength. Glass textolite heated to 300°C and cooled in the exsiccator showed constant relative elongation owing to the elimination of moisture. The bending strength of vacuum-shaped glass textolite after heating to 300°C rose by 15% to 2000 kg/cm², at 350°C by 10% to 1900 kg/cm². The bending strength decreased above 400°C. There are 6 figures and 3 tables.

Card 2/2

MARKOVICH, V. Fe.; CHERNENKO, L.Ye.

Effect of the dispersion medium and of surface-active substances on the plastic strength of structured suspensions of the type of the chocolate paste. Kolloid. Zhur. 15, 204-7 '53. (MLRA 6:5)
(CA 47 no.18:9520 '53)

1. Technol. Inst. Food Ind. , Moscow.

Markovich, V. E.

Effect of the dispersion medium and of surface-active substances on the plastic strength of structured suspensions of the type of the chocolate paste. V. E. Markovich and L. B. Chernenko. *Colloid J. U.S.S.R.* 18, 209-12 (1956) (Engl. translation). See C.A. 47, 3820c. B.L.H.

PETROV, N.A.; CHERNENKO, L.Ye.; MARKOVICH, V.B.

Effect of emulsifiers on structure formation in margarine emulsions.
Izv.vys.ucheb.zav.; pishch.tekh. no.5:39-42 '58. (MIRA 11:12)

1. Moskovskiy tekhnologicheskoy institut pishchevoy promysh-
lennosti, kafedra neorganicheskoy khimii.
(Oleomargarine) (Emulsifying agents)

CHERNENKO, L.Ye.; MARKOVICH, V.E.

Sedimentary compaction of the chocolate mass. Izv.vys.ucheb.
zav.; pishch.tekh. no.5:142-145 '58. (MIRA 11:12)

1. Moskovskiy tekhnologicheskoy institut pishchevoy promyshlennosti, kafedra neorganicheskoy khimii.
(Chocolate)

PETROV, N.A.; CHERMENKO, L. Ye.; MARKOVICH, V.E.

Investigating the kinetics of dewatering of emulsions. Izv.vys.
ucheb.zav.; pishch.tekh. no.1:99-103 '60. (MIRA 13:6)

1. Kafedra neorganicheskoy khimii Moskovskogo tekhnologicheskogo
instituta pishchevoy promyshlennosti.
(Emulsions)

BIL', V.S.; MARKOVICH, V.E.

Effect of the heating conditions of the sample on the value of the
coefficient of linear expansion of plastics. Plast.massy no.10:
50-52 '63. (MIRA 16:10)

PROCESSOR AND PROPERTY INDEX																									
1ST AND 2ND ORDERS																									
Calculation of isomerization equilibrium of ethyl and methyl acetates. D. A. Frank-Kamenetski and V. G. Morozovitch (<i>J. Gen. Chem. Russ.</i>, 1942, 12, 819-822). Quant. calculation of isomerization equilibrium with hydrocarbons, especially very difficult on account of large probable errors in the initial data, is rendered possible for $C_2H_5CO_2CH_3$ (II) or $CH_3CO_2CH_3$ by the very accurate experimental data of Kistiakowsky (A., 1934, 291; 1936, 1, 473) on the heats of hydrogenation of the isomers, by the known Bannas and infra-red spectra which give vibration frequencies of the mol. (Linnert and Avery, A., 1939, 1, 8; Crawford, <i>ibid.</i>, 1939, 1, 644), giving mol. moments of inertia, and by the fact that the absence of internal rotation simplifies calculations. It is shown that the state sum method and the standard entropy method yield the same results for equilibrium constants and concns. at corresponding temp. The const. (state sum method) is 15.71 (228° K.), 9.06 (473° K.), 5.52 (673° K.), 4.94 (773° K.), or 4.31 (873° K.) and the % of (II) in the equilibrium mixture is 5-86, 9-94, 15-34, 17-63, or 19-90 respectively. The heat effect of isomerization has a min. at ~473° K. The calc. concns. of (II) are > the only analytical vals. recorded (Slobodin, A., 1937, 11, 174) but in that case equilibrium was either not attained or it was complicated by the presence of extraneous gases produced possibly by polymerization and decomp. of the polymers. In the standard entropy method the total S ($S_{trans} + S_{rot} + S_{vib}$) is consistently ~2.10 g.-cal. per degree per mol. > Linnert and Avery's results (<i>ibid.</i>); as the results for S_{vib} agree exactly it is supposed that the earlier workers took 12 and not 6 as the symmetry no. for (II), which would make their results low by $R \log 2$ (or 2.19). <i>Int. Chem. Phys. AS USSR</i> ASB 314 METALLURGICAL LITERATURE CLASSIFICATION																									

Isomerization equilibrium between methylacetylene. D. A. Frank-Kamenetski and V. G. Markovitch (*Acta Physicochim.* U.S.S.R., 1949, 17, 808-812).—The value of the equilibrium constant from spectroscopic and heat of hydrogenation data, are 15.6, 9.9, 8.5, 4.7, and 4.3 at 82°, 200°, 400°, 600°, and 800° respectively. With rise of temp. the proportion of $C(CH_3)_2$ in the equilibrium mixture rises from 0.4% to 10.2%. Revised values for the entropy of $C(CH_3)_2$ at these temp. are 60.57, 60.57, 73.66, 76.76, and 79.61 g.-cal. per degree per mol. respectively. C. H. H.

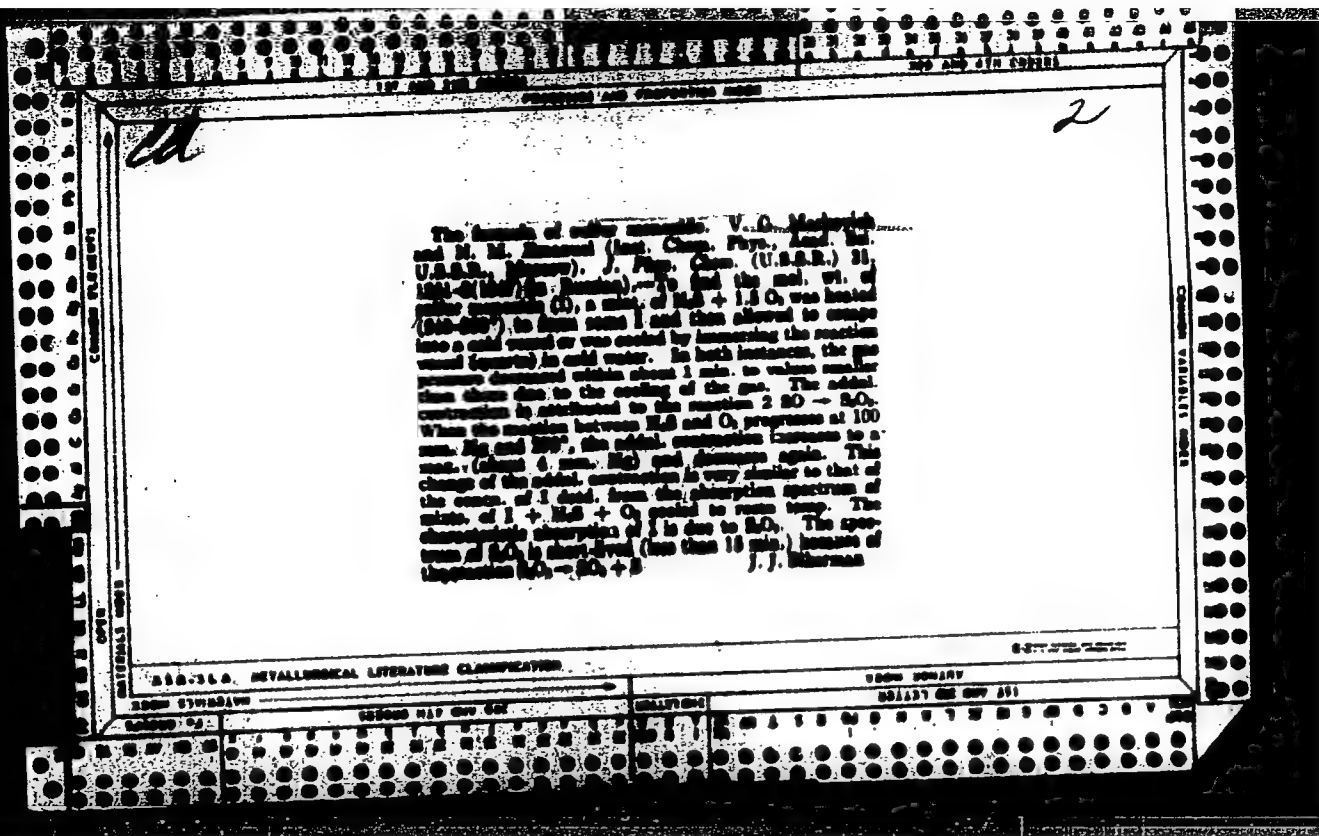
27

B

High Temperature Oxidation Pyrolysis of Fuels as a Commercial Method for Production of Gaseous Olefins. I. Pyrolysis in the Presence of Air of the Residue from the Cracking of Naphtha. II. Pyrolysis of Fuels in the Presence of Water Vapor and Oxygen. (In Russian) D. M. Rudkovsky, V. G. Markovich, and B. A. Kozakova. *Journal of Applied Chemistry* (U.S.S.R.), v. 19, nos. 10-11, 1946, p. 1149-1156; no. 12, 1946, p. 1381-1392.

Gives results of experiments aimed at increasing the yields of unsaturated hydrocarbons from oxidation pyrolysis of petroleum cracking residue. Effects of various factors are tabulated and charged. 20 ref.

AD 554 METALLURGICAL LITERATURE CLASSIFICATION



117 AND 118 SERIES		PROPERTY AND DISPOSITION INDEX		350 ASD 57N 452121	
				2	
<i>(Handwritten initials)</i> Reaction of the heterogeneous reaction of sulfur monoxide during slow oxidation of hydrogen sulfide. V. G. Kuznetsov and M. M. Shumakov. J. Phys. Chem. (U.S.S.R.) 31, 1255-56 (1957) (in Russian); cf. preceding abstr. The obsd. conversion $\text{H}_2\text{S} + 1.5 \text{O}_2 \rightarrow \text{H}_2\text{O} + \text{SO}$, under the transformation $\text{H}_2\text{S} + 1.5 \text{O}_2 \rightarrow \text{H}_2\text{O} + \text{SO}$, indicates the transformation $\text{H}_2\text{S} + 1.5 \text{O}_2 \rightarrow \text{H}_2\text{O} + \text{SO}$. The rate of trans., and pressure. The abs. value of A, which is proportional to the amount of SO before cooling, is proportional to the initial pressure of the gas mixt. within the range studied (60-100 mm. Hg). It is greater at 270° than at 240° or 300°. This dependence of A agrees with the temp. effect on the concn. of SO calcd. from the effect of SO on the limit of ignition of $\text{H}_2\text{S} + \text{O}_2$ mixts. (cf. Shumakov, C.A.B. 1957). When a heated mixt. of H_2S and O_2 cools, SO is allowed to escape into a cold vessel containing water instead of a vacuum; the value of A is reduced to 1/2; apparently SO reacts with CaH_2. J. J. Zimmerman					
ASD-118 METALLURGICAL LITERATURE CLASSIFICATION		SDMS DESIGN		©-BY THE AUTHOR	
SDMS SYMBOL		SDMS NO.		SDMS NO.	
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CA

Effect of diethyl peroxide on decomposition of butane.
 V. K. Malen, V. K. Markovich, and M. B. Neiman.

Zhur. Fiz. Khim. 23, 1187 (1949). When butane (I) at 100-200 mm. Hg was introduced into a quartz vessel heated to 382-461°, the pressure P suddenly (in a fraction of a sec.) increased by 4-10 mm.; this presumably was due to the presence of 0.015% O in I (cf. C.A. 43, 7300f). Then P increased slowly at a const. rate v_1 . The P of $(EtO)_2$ dild. with 32 vols. N increased at once by an amt. twice that in the absence of N but less than in an explosion of $(EtO)_2$; P increased slowly at the rate v_2 . A mixt. of I with 3% $(EtO)_2$ showed first a rapid and then a slow increase of P at the rate $v_1 + v_2$, thus proving that I and $(EtO)_2$ decompd. independently of each other. $(EtO)_2$ (1-3%) had no effect on the decompn. of I also during streaming through a "durabax" tube at atm. pressure and 500-850° when the amt. decompd. varied between 2 and 10%. This makes chain mechanism of the decompn. of I unlikely.

J. J. Bikerman.

Lab for Study Oxidation of hydrocarbons
 Inst Chem Phys, AS USSR

1ST AND 2ND ORDER		PROCESSING AND PROPERTIES INDEX		3RD AND 4TH ORDER	
27					
B Influence of Oxygen Addition on the Thermal Dissociation of Butane. (In Russian.) Z. K. Matzus, V. G. Markovitch, and M. B. Neiman. <i>Doklady Akademii Nauk SSSR</i> (Reports of the Academy of Sciences of the USSR), new ser., v. 68, June 21, 1949, p. 1121-1124. Effects of 0.015-2.51% O₂ in butane were determined over a range of temperatures and pressures, and under static conditions. Attempts to apply the results to paraffin hydrocarbons in general were made.					
METALLURGICAL LITERATURE CLASSIFICATION					
FROM DIVISION 100000 110000 120000 130000 140000 150000 160000 170000 180000 190000 200000 210000 220000 230000 240000 250000 260000 270000 280000 290000 300000 310000 320000 330000 340000 350000 360000 370000 380000 390000 400000 410000 420000 430000 440000 450000 460000 470000 480000 490000 500000 510000 520000 530000 540000 550000 560000 570000 580000 590000 600000 610000 620000 630000 640000 650000 660000 670000 680000 690000 700000 710000 720000 730000 740000 750000 760000 770000 780000 790000 800000 810000 820000 830000 840000 850000 860000 870000 880000 890000 900000 910000 920000 930000 940000 950000 960000 970000 980000 990000 1000000					

MARKOVICH, V. G.

U S S R .

Thermochemical investigations of solutions. V. Pressure and composition of vapors of binary systems of acetaldehyde and water. A. A. Dobrinskaya, V. G. Markovich and M. B. Nelman (Inst. Chem. Phys., Acad. Sci. U.S.S.R., Leningrad). *Izv. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1953, 434-41; *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1953, 391-0; *cf. C.A.* 44, 9231a. The vapor pressures of pure and of aq. air-free solns. of AcH were detd. by the static method over the temp. range 0-25° for solns. contg. from 10 to 90% of AcH. The compns. of the vapors were detd. by a dynamic method. The vapor-pressure curve of AcH is given by $\log p = 7.821 - (6090/2.3RT)$. The vapor pressures of the solns., as shown in 5 figs. and 8 tables, are very close to those calcd. by the Duhem-Margules method, and obey the equation $d \ln p/dT = L/RT^2$. The exptl. values of the heats of vaporization L for various concns. of solns. are, resp., 10%, 10,100; 20%, 8050; 30%, 8050; 50%, 6600; 90%, 6270 cal./mol. Values for the heats of diln. Q and Q_1 are also given. F. H. R.

MISHCHENKO, K.P.; PONOMAREVA, A.M.; RAVDEL', A.A.; BARON, N.M.;
YEGOROV, I.M.; KVIAT, E.I.; VOLOVA, Ye.D.; MARKOVICH, V.G.;
SEME NOV, G.I.; MARGOLIS, V.N., SMORODINA, T.P.; YAVORSKIY,
I.V. Prinimal uchastiye FRANK-KAMENETSKIY, V.A.; TOMARCHENKO,
S.L., red.; LEVIN, S.S., tekhn. red.

[Practical work in physical chemistry] Prakticheskie raboty po
fizicheskoi khimii. Izd.2., perer. Leningrad, Gos. nauchno-
tekhn. izd-vo khim. lit-ry, 1961. 374 p. (MIRA 15:2)
(Chemistry, Physical and theoretical--Laboratory manuals)

MARKOVICH, V.I.

Protracted amental states and their treatment with neuroleptics.
Vop.psikh.i nevr. no.7:468-471 '61. (MIRA 15:8)

1. Iz Psikhiatricheskoy bol'nitsy imeni P.P.Kashchenko (glavnyy
vrach I.T.Viktorov, nauchnyy konsul'tant prof. Ye.S.Averbukh).
(MENTAL ILLNESS) (AUTONOMIC DRUGS)

MAROVICH Ya. L.

Markovich, Ya. L.--"Atypical forms of diseases of Shtrom-Ventrol', (the cases of cerebellumextrapyramidal dystonia with localization of focus can be-- cerebral)," Trudy (Sarat. gos. med. inst), Vol. II, 1944, p. 177-180.

LC: U-3264, 10 April 1955, (Levin: Zhurnal 'nykh Statist, No. 3, 1944)

MARKOVICH, Ya. L.

BELYAYEVSKIY, V.F., inzh.; MARKOVICH, Ya. L., inzh.

Sakhalin paper industry in the postwar period. Bum. prom. 32 no.12:
15-18 D '57. (MIRA 11:1)

1. Sakhalinskiy sovet narodnogo khozyaystva (for Belyayevskiy).
2. Sakhalinbuntrest (for Markovich).
(Sakhalin--Paper industry)

MARKOVICH, YE.A., RASHKOV, A.I., KUTACHEVA, G.A. (Kazn Chem. Tech. Inst. im. S.M. Kirov)

"Biologically Active Alkylated Amido-Esters and Compound Esters of Alkylphosphinic ACids" (Biologicheski aktivnyye alkilirovannyye amido-efiry i smeshannyye efery alkilfosfinovykh kislot) (Work carried out 1945-1950)

Chemistry and Uses of Organophosphorus Compounds
(Khimiya i primeneniye organofosfornykh soedineniy),
Trudy of First Conference, held December 1955, Kazan,
pp. Published by Kazan Acad. AS USSR, 1957
194-204,

Markovich/E

Biologically active alkylated amide acids and mixed esters of alkylphosphonic acids. A. I. Reznikov, E. A. Markovich, and O. A. Mukhacheva (S. M. Kirin Chem. Technol. Inst., Kuzan). *Khim. i Prikladn. Posfororgan. Soedineni*, Akad. Nauk S.S.S.R., *Trudy 1-oi Konferents.* 1955, 194-204 (Pub. 1957). — The following substances were prepd. during 1945-50 in a search for biologically active compds. of P which would not have the defects of fluorophosphates. Addn. of PCl_5 to $\text{RPO}(\text{OR})_2$ gives 10-30% RPOCl_2 and up to 40% $\text{RPOCl}(\text{OR})$, but the products have close b.ps. and sepn. is difficult. SOCl_2 also gave unsatisfactory results. Reaction of RPOCl_2 with $\text{R}_2\text{NH} \cdot \text{HCl}$ is not very good, it requires 3 moles RPOCl_2 and gives no more than 30-40% desired $\text{RP}(\text{O})(\text{NR}_2)_2\text{Cl}$. Reaction of 2 moles R_2NH with 1 mole RPOCl_2 however did yield: $\text{MeP}(\text{O})(\text{N}-\text{Et})_2\text{Cl}$, b. 115-5.5°, d_4^{20} 1.1275, n_D^{20} 1.4648; $\text{EtP}(\text{O})(\text{N}-\text{Et})_2\text{Cl}$, b. 101.5°, 1.1140, 1.0935, 1.4643; $\text{PrP}(\text{O})(\text{N}-\text{Et})_2\text{Cl}$, b. 101.5°, 1.1140, 1.0935, 1.4643; $\text{PrP}(\text{O})(\text{N}-\text{Et})_2\text{Cl}$, b. 101.5°, 1.1140, 1.0935, 1.4643.

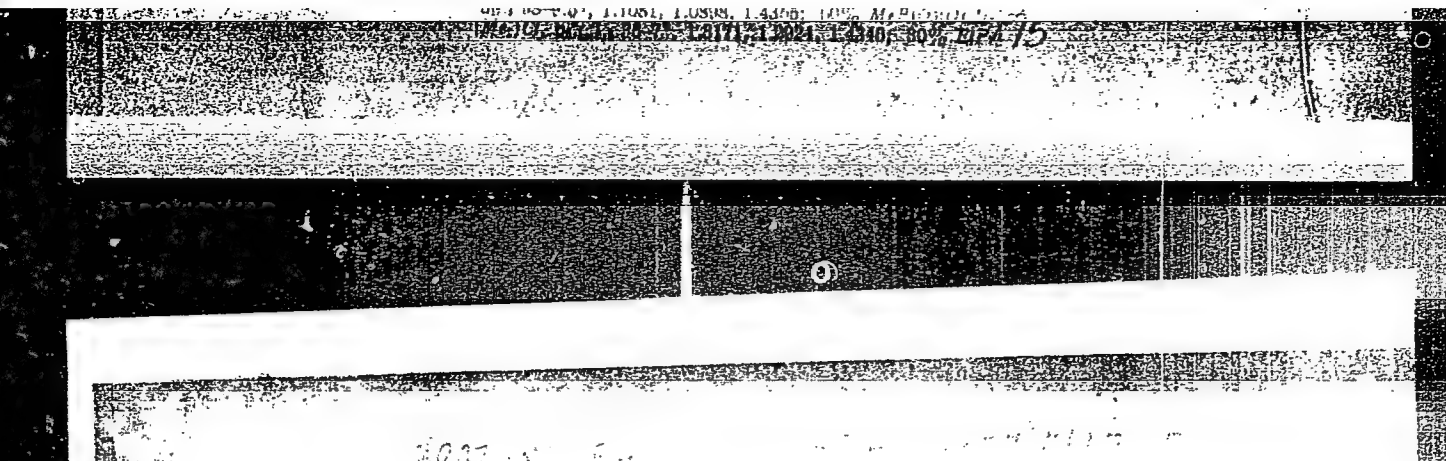
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RAZUMOV, A.I. MARKOV, E.A. MURIA, E.V. DIA. 1977

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KAZUNOV, E.A., MAL'KOVICH, E.A., MUKHOMEDOV, S.H.

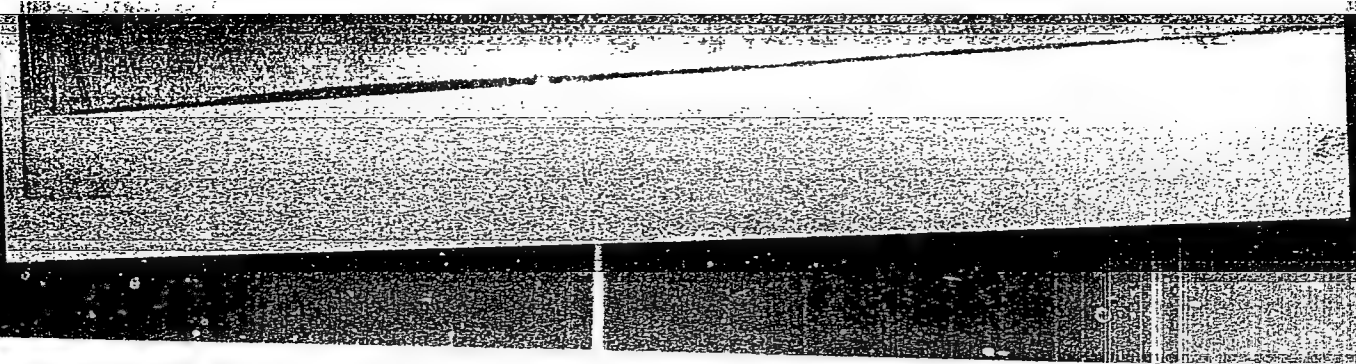
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RAZUMOV, A.I., MACKOVICH, E.A., MUKHACHEVA, O.A.

1.4305; $\text{EtP}(\text{O})(\text{OEt})\text{N}(\text{CH}_2\text{CH}_3)_2$, b.p. 80-82°, 1.0930, 1.0752, 1.4488; $\text{EtP}(\text{O})(\text{OEt})\text{NHCH}_2\text{CH}_2\text{Cl}$, b.p. 144-5°, 1.1093, 1.1515, 1.4565; $\text{EtP}(\text{O})(\text{OEt})\text{NHCH}_2\text{CH}_2\text{NEt}_2$, b.p. 153-4°, 0.9733, 0.9594, 1.4530; $\text{EtP}(\text{O})(\text{SEt})\text{NEt}_2$, b.p. 106-8°, 1.0455, 1.0207, 1.4392; $\text{EtP}(\text{O})(\text{NEt}_2)\text{OC}_2\text{H}_4\text{NO}_2$, b.p. 172-5°, 1.2019, 1.1861, 1.5309; $\text{MeP}(\text{O})(\text{OMe})\text{NEt}_2$, b.p. 71-4°, 1.0387, 1.0264, 1.4355; $\text{MeP}(\text{O})(\text{OEt})\text{NEt}_2$, b.p. 77-9°, 1.0127, 0.9944, 1.4350; $\text{MeP}(\text{O})(\text{OCH}_2\text{Me})\text{NEt}_2$, b.p. 80-1°, 1.0301, 1.0743, 1.4395; $\text{iso-PrP}(\text{O})(\text{OEt})\text{NEt}_2$, b.p. 74.5-5°, 0.9866, 0.9709, 1.4360. All these were biologically active inhibitors of cholinesterase and miotics. Insecticidal and other biological properties were not examined. Miiosis lasting up to 50 days was produced by them in cats. Stability of aq. solns. ranged from 10 to 50 days. The most active miotics were: $\text{EtP}(\text{O})(\text{OCH}_2\text{Me})\text{NEt}_2$ (0.15% aq. soln.; 50% cholinesterase inhibition by $6 \times 10^{-4} \text{ M}$ concn.) and $\text{EtP}(\text{O})(\text{OEt})\text{NHEt}$ (0.1% ; $1 \times 10^{-4} \text{ M}$). The ester chlorides also gave the mixed esters: $\text{EtP}(\text{O})(\text{OMe})\text{OC}_2\text{H}_4\text{NO}_2$, b.p. 159-60°, 1.3018, 1.5294; $\text{EtP}(\text{O})(\text{OEt})\text{OC}_2\text{H}_4\text{NO}_2$, b.p. 163-5°, 1.2716, 1.2545, 1.6242; $\text{EtP}(\text{O})(\text{OEt})\text{OC}_2\text{H}_4\text{NO}_2$, b.p. 140-2°, 1.2686, 1.2487, 1.5115; $\text{EtP}(\text{O})(\text{OEt})\text{OC}_2\text{H}_4\text{NO}_2$, b.p. 145-9°, 1.2965, 1.2482, 1.5110; $\text{EtP}(\text{O})(\text{OEt})\text{OC}_2\text{H}_4\text{NO}_2$, b.p. 158-8.5°, 1.2407, 1.2261, 1.5210; $\text{EtP}(\text{O})(\text{OCH}_2\text{Me})\text{OC}_2\text{H}_4\text{NO}_2$, b.p. 161-4°, 1.2286, 1.5233; $\text{EtP}(\text{O})(\text{OBu})\text{OC}_2\text{H}_4\text{NO}_2$, b.p. 181.5-2.5°, 1.2137, 1.1903, 1.5189; $\text{EtP}(\text{O})(\text{OCH}_2\text{CH}_2\text{Me})\text{OC}_2\text{H}_4\text{NO}_2$, b.p. 163.5-4°, 1.2139, 1.1971, 1.5174; $\text{EtP}(\text{O})(\text{OEt})\text{OC}_2\text{H}_4\text{Cl}$, b.p. 117-18°, 1.2298, 1.2122, 1.5050; $\text{EtP}(\text{O})(\text{OEt})\text{OC}_2\text{H}_4\text{Cl}$, b.p. 106-7°, 1.2250, 1.2095, 1.5045; $\text{EtP}(\text{O})(\text{OEt})\text{OC}_2\text{H}_4\text{Cl}$, b.p. 112-3°, 1.4240. $\text{EtP}(\text{O})(\text{OEt})\text{OC}_2\text{H}_4\text{NO}_2$, m.p. 111°. These were more interesting and useful compds. than the ester amides, being stable and

РАЗУМОВ А.И., МАРКОВИЧ Ф.А., МИКШАСОВ А.О.

highly active. Especially powerful antitumor action was found in $\text{BiPO}_3\text{OEt}_2\text{OC}_6\text{H}_4\text{NO}_2$, which was named Armon; the substance shows the highest activity against the Ehrlich ascites tumor. The compound is also effective in gliomas when tumor mechanism fails. It shows no side reactions in the patient; it is being employed in leukaemia and infantile paralysis therapy. The other esters in the above group are similar in action, but with less power. Also there were prepared $\text{RO}_3\text{P}(\text{OC}_6\text{H}_4)_2$ and $\text{RO}_3\text{P}(\text{NH}_2)_2$ series. Attempts to effect the Arbuzov reaction with these gave very low yields of phosphonates; the reactions with RX yielding mainly the quaternary salts. The substances added S. Some of the $\text{P}(\text{NH}_2)_2$ ester amides produced myositis, while the S adducts were insecticidal.

G. M. Kosolapov

RM

MARKOVICH, Y. A.

Distr: 4E4

1-Ethyl-4-nitrophenyl ester of ethylphosphinic acid (Armine), its homologs and analogs. A. I. Razumov, B. A. Markovich, and O. A. Mukhsheva. U.S.S.R. 103,034, June 25, 1956. The title compds. are obtained by isomerization of phosphites in the presence of a small quantity of already isomerized phosphite followed by chlorination of the resulting product with PCl_5 . The last step is carried out in a greatly ridd. soln. in an inert solvent, such as CCl_4 . Finally, the halide is exchanged for a 4-nitrophenyl or other similar group. M. Hosh

MARKOVICH, YEA

Distri: 4E43/4E2c(j)/
4E3d

Derivatives of alkylphosphonates and phosphonic acids
VI. Halides and alkylated amides of alkyl(alkoxy)phosphonic acids. A. I. Razumov, G. A. Mukhacheva, and B. A. Markovich (Chem. Technol. Inst. Kazan). *Zhur. Obshch. Khim.*, 27, 2369-64 (1957); *Chem. Abstr.*, 51, 16832d; U.S.S.R. 102,481. — To 189 g. EtP(O)(OEt)_2 in 2 l. CCl_4 was added with stirring in small portions 175 g. PCl_5 over 14 hrs. at 25-30°; after stirring 1 hr. the mixt. was distd. *in vacuo* yielding the following: 80% EtP(O)(OEt)Cl , b_p 72-4°, d_4^{20} 1.1631, n_D^{20} 1.4338; 80% EtP(O)(OPr)Cl , b_p 78-4°, d_4^{20} 1.1303, 1.4400; 45% EtP(O)(Pr-iso)Cl , b_p 76.8-85-7°, d_4^{20} 1.1033, 1.4286; 70% EtP(O)(OBu)Cl , b_p 100-2°, 8.5°, 1.1033, 1.4286; 70% EtP(O)(OBu-iso)Cl , b_p 98-9.5°, 1.0993, 1.4395; 70% EtP(O)(OPr-iso)Cl , b_p 88-7°, 1.0924, 1.4340. In the prepn. of the iso-Pr ester of EtP(O)H , a difficulty was encountered in both usual methods of synthesis; the Arbuzov reaction gave a contamination of iso-PrP(O)(OPr-iso) from iso-PrI reaction, while the Michaelis reaction gave only the salts, rather than the desired ester. The necessary EtP(O)(OPr-iso)_2 , b_p 83-90°, 0.9704, 1.4120, was finally prepd. by oxidation of the EtP(O)(OPr-iso) by an unstated method. The chloroesters above are readily hydrolyzed by atm. moisture; with H_2O in the presence of a base they yield the corresponding pyrophosphonates; on heating they decomp. to RCl and RPO . The ester chlorides (1 mole) treated with 2 moles of an amine in Et_2O at -15° gave after filtration and distn. the following amide esters, most of which are sol. in H_2O : 58% EtP(O)(OMe)NEt_2 , b_p 87-7.5°, 1.0043, 1.4381; 56% EtP(O)(OEt)NEt_2 , b_p 92-3.5°, 0.9866, 1.4355; 33% EtP(O)(OPr)NEt_2 , b_p 98-9°, 0.9783, 1.4368; 48% $\text{EtP(O)(OPr-iso)NEt}_2$, b_p 87-8.5°, 0.9050, 1.4381; 76% EtP(O)(OBu)NEt_2 , b_p 98.5-9.5°, 0.9502, 1.4300; 95% $\text{EtP(O)(OBu-iso)NEt}_2$, b_p 98.5-7°, 0.9553, 1.4357; 12% $\text{EtP(O)(OC}_2\text{H}_5)_2\text{NEt}_2$, b_p 116.5-8°.

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A. I. RAZUMOV, O. A. MUKHACHEVA

0.4423, 1.4417; 15% $\text{EtP}(\text{O})(\text{OC}_2\text{H}_5)_2\text{NEt}$, b.p. 118-20.5°;
 1.0036, 1.4630; 25% $\text{EtP}(\text{O})(\text{OCH}_2\text{Ph})_2\text{NEt}$, b.p. 162-3°;
 1.0554, 1.4976; 27% $\text{EtP}(\text{O})(\text{OEt})_2\text{NEt}$, b.p. 111.5-12°;
 1.0232, 1.4380; 73% $\text{EtP}(\text{O})(\text{OBu-iso})_2\text{NEt}$, b.p. 123-9.5°;
 0.9749, 1.4358; 78% $\text{EtP}(\text{O})(\text{OEt})_2\text{NM}$, b.p. 63-4°; 1.0100,
 1.4305; 60% $\text{EtP}(\text{O})(\text{OEt})_2\text{N}(\text{CH}_3)_2$, b.p. 89-52°; 1.0752,
 1.4488 (c. 2:1 molar mixt. of reactants); 52% $\text{EtP}(\text{O})(\text{OEt})_2\text{NHCH}_2\text{CH}_2\text{Cl}$, b.p. 144-5°; 1.1515, 1.4565 (an equimolar
 mixt.); 61% $\text{EtP}(\text{O})(\text{OEt})_2\text{NHCH}_2\text{CH}_2\text{NEt}$, b.p. 153-4°;
 0.9594, 1.4530; 55% $\text{EtP}(\text{O})(\text{OC}_2\text{H}_5)_2\text{NO}_2\text{NEt}$, b.p. 172.5°;
 1.1861, 1.5309; 52% $\text{EtP}(\text{O})(\text{SEt})_2\text{NEt}$, b.p. 106-8°;
 1.0297, 1.4602. Also were prepd.: 50% $\text{MeP}(\text{O})(\text{OEt})_2\text{NEt}$,
 b.p. 71-4°; 1.0214, 1.4355; 50% $\text{MeP}(\text{O})(\text{OEt})_2\text{NEt}$,
 b.p. 77-9°; 0.9944, 1.4350; 41% $\text{MeP}(\text{O})(\text{OPr-iso})_2\text{NEt}$,
 b.p. 80-1.5°; 1.0763, 1.4395; 57% $\text{iso-PrP}(\text{O})(\text{OEt})_2\text{NEt}$,
 b.p. 74.5-5°; 0.9709, 1.4280. The amides are readily hydrolyzed,
 especially in acid solns., and treatment with dil. HCl yields the appropriate pyrophosphate. The ester amides
 are biologically active and inhibit cholinesterase to the extent of 50% at
 concn. of 1.5×10^{-4} , with this property, however, their toxicity is low and
 LD₅₀ intravenously for mice ranges from 2.5 to 1308 mg./kg. Most of the ester
 amides produce myosis which may last up to 50 days in cats and humans.
 Most of the amides are sol. in H₂O and their solns. are stable for not
 over 25 days. To 47 g. $\text{EtP}(\text{O})(\text{OEt})_2\text{Cl}$ in C₆H₆ and 26.2 g. NaHCO₃ (or
 an equiv. amt. pyridine) was added 0.6 ml. H₂O (exothermic reaction)
 yielding after filtration 18% $[\text{EtP}(\text{O})(\text{OEt})_2]_2\text{O}$, b.p. 139.5-41°;
 d₄ 1.1833, n_D 1.4280. The same formed in 50% yield on addn. to 100 ml.
 Et₂O, 0.5 g. H₂O, and 1.8 g. HCl of 20 ml. Et₂O contg. 8 g. $\text{EtP}(\text{O})(\text{OEt})_2\text{NH}_2$. VII. Mixed
 esters of primary phosphoric acids: A. I. Razumov, B. A. Markovich, and
 A. D. Reshetnikov. *Ibid.* 2394-8. Into a soln. of 13.4 g. $\text{EtP}(\text{O})(\text{OEt})_2\text{H}$,
 b.p. 77.5°, d₄ 1.0779, n_D 1.4262, Cl was passed at -15° until a
 yellowish color

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A.I. RAZUMOV, O.A. MUKHACHEVA

appeared; after blowing with N 36% EtP(O)(OEt)Cl was obtained. This (204.5 g.) added to 181 g. $\text{p-O}_2\text{NC}_6\text{H}_4\text{OH}$ and 1.5 l. dry Et_2O and stirred 45 min, then slowly treated with 132 g. Et_3N in Et_2O , and refluxed 40 min, gave after filtration and distn. (not over 0.2 mm. pressure to avoid decompa.) 81% $\text{EtP(O)(OEt)OC}_6\text{H}_4\text{NO}_2$ -p, b_p , 163-5°, 1.2545, 1.5242. Similarly were prepd.: 44% $\text{EtP(O)(OEt)OC}_6\text{H}_4\text{NO}_2$ -p, b_p , 159-60°, 1.3018, 1.5294; 44% $\text{EtP(O)(OEt)OC}_6\text{H}_4\text{NO}_2$ -o, b_o , 140-2°, 1.2487, 1.5115; 60% $\text{EtP(O)(OEt)OC}_6\text{H}_4\text{NO}_2$ -o(stc), b_o , 145-8°, 1.2488, 1.5110; 60% $\text{EtP(O)(OPr)OC}_6\text{H}_4\text{NO}_2$ -p, b_p , 158-9.5°, 1.2231, 1.5210; 15% $\text{EtP(O)(OPr)OC}_6\text{H}_4\text{NO}_2$ -p, b_p , 161-4°, 1.2288, 1.5223; 57% $\text{EtP(O)(OBu)OC}_6\text{H}_4\text{NO}_2$ -p, b_p , 181.5-2.5°, 1.1988, 1.5189; 22% $\text{EtP(O)(OBu)OC}_6\text{H}_4\text{NO}_2$ -p, b_p , 163.5-4°, 1.1971, 1.5174; 60% $\text{EtP(O)(OEt)OC}_6\text{H}_4\text{Cl}$ -p, b_p , 117-18°, 1.2122, 1.5050; 32% $\text{EtP(O)(OEt)OC}_6\text{H}_4\text{Cl}$ -o, b_o , 106-7°, 1.2085, 1.5046. The esters are slightly sol. in H_2O and are stable in aq. soln. for several years, but are hydrolyzed in alk. solns. All are strong myotics and inhibitors of cholinesterase. The Et p-nitrophenyl ester is most active giving myosis at 1:200,000 diln. and having anticholinesterase activity at 2×10^{-7} concn. This substance, named Armin, is used clinically for glaucoma treatment.

G. M. Kosolapoff

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DM

M. A. R. V. I. C. H. Y. E. A.

RAZUMOV, A.I.; MARKOVICH, Ye.A.; RESHETNIKOVA, A.D.

Alkylphosphinous and phosphinic acid derivatives. Part 7:
Mixed esters of primary phosphinic acids. Zhur. ob. khim.
27 no.9:2394-2396 S '57. (MIRA 11:3)

1. Kazanskiy khimiko-tehnologicheskii institut.
(Phosphinic acid)

MARKOVICH, YE. A.

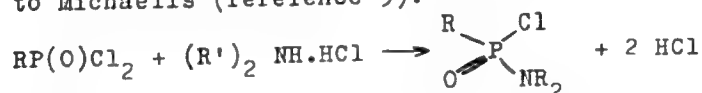
79-1-41/63

AUTHORS: Razumov, A. I. , Mukhacheva, O. A. , Markovich, Ye. A.

TITLE: Investigations in the Series of Alkylphosphinic and Phosphinic Acids (Issledovaniya v ryadu alkilfosfinistykh i fosfinovykh kislot) VIII. Synthesis and Properties of Some Alkylated Amides of Alkylchlorophosphinic Acids (VIII. Sintez i svoystva nekotorykh alkilirovannykh amidov alkilkhlorfosfinovykh kislot)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 1, p .194-197 (USSR)

ABSTRACT: In order to come to the alkylated amides of alkylchlorophosphinic acids, two methods were investigated. The first one consisted of the ammonium conversion of the full acid-chlorine-anhydrides with the hydrochlorides of amines according to Michaelis (reference 3):



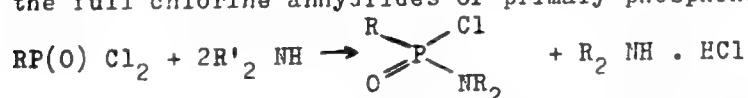
Card 1/3

This method gives a yield of 30 - 35 % and requires at least

75-1-11/63

Investigations in the Series of Alkylphosphinic and Phosphinic Acids. VIII.
Synthesis and Properties of Some Alkylated Amides of Alkylchlorophosphinic
Acids

the triple amount of the theoretical yield of chloroanhydride which is for the most part lost. For this reason the authors preferred the method of the partial ammonium conversion of the full chlorine anhydrides of primary phosphinic acids



In this manner they synthesized some representatives of this series of compounds (table 1), whereas the ammonium conversion with primary amines in a vacuum yielded nondistillable and impure products. The alkylated amides of alkylfluorophosphinic acids are liquids with a high slight aromatic smell. They are fairly stable with regard to hydrolysis and are of a high toxic nature. Thus the authors synthesized some representatives of alkylphosphinic acids with mixed functions: alkylated amides of chloro- and fluorophosphinic acids as well as full fluorine anhydrides of alkylphosphinic acids. The authors determined an easy hydrolyzability of the alkylated amides of chlo-

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72-1-41/66

Investigations in the Series of Alkylphosphinic and Phosphinic Acids. VIII.
Synthesis and Properties of Some Alkylated Amides of Alkylchlorophosphinic
Acids

lorphosphinic acids and an instability of the P-N bond in those of fluorophosphinic acids. The easy hydrolyzability of the former already at mere humidity easily leads to alkylated amides of alkylpyrophosphinic acids. Thanks to the instability of the P-N bond in the amides of fluorophosphinic acids on heating full fluorine anhydrides of these acids can be obtained. There are 3 tables, and 13 references, 5 of which are Slavic.

ASSOCIATION: **Kazan' Chemical-Technological Institute**
(Kazanskiy khimio-tekhnologicheskii institut)

SUBMITTED: November 22, 1956

AVAILABLE: Library of Congress

Card 3/3 1. Chemistry 2. Phospinic acid-Properties 3. Phosphinic acid-Synthesis

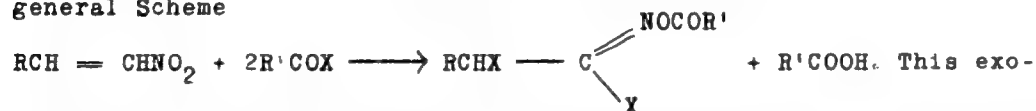
S/079/60/030/006/022/033/XX
B001/B055

AUTHORS: Kozlov, L. M., Markovich, Ye. A., and Liorber, B. G.

TITLE: On the Reaction of Nitro-olefins With Acyl Halides

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 6,
pp. 1937 - 1941

TEXT: Basing on the publications Refs. 1-5, the authors investigated the reactions of α -nitro-olefins with acyl halides. Unexpectedly, a nitroso-oxim rearrangement of the α -nitro-olefins takes place in this reaction, leading to the acid halides of α -halo-N-acyl hydroxamic acids and separation of the corresponding organic acids according to the general Scheme



thermic reaction occurs readily and gives good yields. It is accelerated by the acid catalysts $ZnCl_2$, $ZnBr_2$, and H_2SO_4 . The formation of

Card 1/3

On the Reaction of Nitro-olefins With
Acyl Halides

S/079/60/030/006/022/033/XX
B001/B055

nitroso compounds as intermediates is indicated by the blue-green color of the reaction mixture which disappears towards the end of the reaction. It is assumed that the first step is an addition in the 1,4-position of $(CH_3)_2C = CHNO_2$ (Ref.3) and is followed by addition to the

C = N bond and splitting off of the acid. The structure of the acid halides of the α -halo-N-acyl hydroxamic acids was established by hydrolysis of the acid bromide of α -bromo-N-propionyl hydroxamic acid, which gave hydroxylamine hydrobromide, α -hydroxy-isobutyric acid, propionic acid, and hydrobromic acid. All the acid halides of the α -bromo-N-acyl hydroxamic acids turn red on addition of a solution of iron chloride in aqueous alcoholic solution. Tertiary nitro-olefins reacted under similar conditions only with one molecule of acid halide, but the reaction products could not be obtained in analytical purity, since they evidently distill off together with the initial nitro-olefins. The constants and yields of the compounds synthesized are tabulated. There are 1 table and 8 references: 1 Soviet, 2 US, 3 British, 5 German, and 1 French.

Card 2/3

On the Reaction of Nitro-olefins With
Acyl Halides

S/079/60/030/006/022/033/XX
B001/B055

ASSOCIATION: Kazanskiy khimiko-tekhnologicheskii institut imeni
S. M. Kirova (Kazan' Institute of Chemical Technology
imeni S. M. Kirov)

SUBMITTED: February 23, 1959

Card 3/3

ACCESSION NR: AP3001482

2/0079/63/033/005/1478/1485

AUTHOR: Kozlov, L. M. ; Korolova, L. A. ; Markovich, Ye. A.

TITLE: Nitroethers of ortho silicic acid

SOURCE: Khimicheskaya khimiya, v. 33, no. 5, 1963, 1478-1485

TOPIC TAGS: nitroethers, ortho silicic acid, alkyl chlorosilanes, silanes

ABSTRACT: A method for making nitroethers of ortho silicic acid involves reacting alkyl chlorosilanes with nitroalcohols at room or lower temperatures. Product nitroethers, obtained in a 30-60% yield are more stable to hydrolysis than corresponding non-nitrated compounds. They are heat stable to about 200°, high-boiling and water-insoluble. 40 new silane compounds were synthesized and analyzed. Orig. art. has: 1 table.

ASSOCIATION: none

SUBMITTED: 27Apr63

DATE ACQ: 17Jan 69

ENCL: 00

SUB CODE: 00

NO REF SOV: 006

OTHER: 001

Cards 1/1

MARKOVICH, Ye.M.; PADDEYEVA, I.Z.

A new middle Jurassic fern from the Orsk brown coal basin.
Paleont.zhur. no.3:127-130 '60. (MIRA 13:10)

1. Laboratoriya geologii uglya Akademii nauk SSSR.
(Aktyubinsk Province--Gerne, Fossil)

VOLKOV, V.N.; MARKOVICH, Ye.M.; FADDEYEVA, I.Z.; VOLKOVA, I.B.

Short review of the history of the study of lower Mesozoic sediments
in the southern Magnitogorsk synclinorium. Trudy Lab.geol.ugl.
no.12:9-14 '61. (MIRA 14:8)

(Ural Mountains—Coal geology)

KOLESNIKOV, Ch.M.; SPASSKAYA, I.S.; MARKOVICH, Ye.M.; FADDEYEVA, Z.I.

Paleontological characteristics of lower Mesozoic sediments in the
southern Magnitogorsk synclinorium. Trudy Lab.geol.ugl. no.12:78-
82 '61. (MIRA 14:8)

(Ural Mountains—Coal geology)

GORSKIY, I.I.; LEONENOK, N.I.; VOLKOV, V.N.; VOLKOVA, I.B.; MARKOVICH, Ye.M.

Evaluating coal potentials of the lower Mesozoic in the southern
Magnitogorsk synclinorium. Trudy Lab.geol.ugl. no.12:169-175 :61.
(Ural Mountains--Coal geology) (MIRA 14:8)

VOLKOVA, I.B.; NALIVKIN, D.V.; SLATVINSKAYA, Ye.A.; BOGOMAZOV, V.M.;
 GAVRILOVA, O.I.; GUREVICH, A.B.; MUDROV, A.M.; NIKOL'SKIY, V.M.;
 OSHURKOVA, M.V.; PETRENKO, A.A.; POGREBITSKIY, Ye.O.; RITENBERG,
 M.I.; BOCHKOVSKIY, F.A.; KIM, N.G.; LUSHCHIKHIN, G.M.; LYUBER,
 A.A.; MAKEDONTOV, A.V.; SENDERZON, E.M.; SINITSYN, V.M.; SHORIN,
 V.P.; BELYANKIN, L.F.; VAL'TS, I.E.; VLASOV, V.M.; ISHINA, T.A.;
 KONIVETS, V.I.; MARKOVICH, Ye.M.; MOKRINSKIY, V.V.; PROSVIRYAKOVA,
 Z.P.; RADCHENKO, O.A.; SEMERIKOV, A.A.; FADDEYEVA, Z.I.; BUTOVA,
 Ye.P.; VERBITSKAYA, Z.I.; DZENS-LITOVSKAYA, O.A.; DUBAR', G.P.;
 IVANOV, N.V.; KARPOV, N.F.; KOLESNIKOV, Ch.M.; NEFED'YEV, L.P.;
 POPOV, G.G.; SHTEMPEL', B.M.; KIRYUKOV, V.V.; LAVROV, V.V.;
 SAL'NIKOV, B.A.; MONAKHOVA, L.P.[deceased]; MURATOV, M.V.;
 GORSKIY, I.I., glav. red.; GUSEV, A.I., red.; MOLCHANOV, I.I.,
 red.; TYZHN OV, A.V., red.; SHABAROV, N.V., red.; YAVORSKIY, V.I.,
 red.; REYKHERT, L.A., red.izd-va; ZAMARAYEVA, R.A., tekhn. red

[Atlas of maps of coal deposits of the U.S.S.R.] Atlas kart ugle-
 nakopleniya na territorii SSSR. Glav. red. I.I.Gorskiy. Zam.
 glav. red. V.V.Mokrinskiy. Chleny red. kollegii: F.A.Bochkovski
 i dr. Moskva, Izd-vo Akad. nauk SSSR, 1962. 17 p.
 (MIRA 16:3)

1. Akademiya nauk SSSR. Laboratoriya geologii uglia. 2. Chlen-
 korrespondent Akademii nauk SSSR (for Muratov).
 (Coal geology—Maps)

MARKOVICH, Ye.N.

The "Malinovka" Collective Farm makes progress. Zemledelie 5 no.11:
90-93 N '57. (MIRA 10:11)

1. Predsedatel' kolkhoza "Malinovka" Vsevolozhskogo rayona, Lenin-
gradskoy oblasti.
(Collective farms)

MARKOVICH, YU.N.

S/137/60/000/006/004/015
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 6, p. 277,
13676

AUTHORS: Gavrilov, P.D., Kurbangaleyev, R.M., Alentov, A.N., Markovich,
Yu.N.

TITLE: The Effect of Iron on Magnetic Properties of a Copper-Cobalt
Alloy

PERIODICAL: Tr. Kazansk. khim.-tekhnol. in-ta, 1957 (1959), No. 22, pp. 161-
171

TEXT: The authors studied the effect of Fe admixtures ($\sim 2\%$) on the magnetic properties of a 50% Cu - 20% Ni 30% Co-alloy. Tests were made with cast, cast-annealed specimens (850°C, 8 - 32 hrs) and specimens subjected to heat treatment to improve their magnetic properties (oil and water quenching at 1,150°C, tempering at 650°C for 3 and 6 hours); and rolled specimens. Best deformability was revealed in specimens annealed for 16 hours. B_r of 4100 gauss and H_c of 560 oersteds were obtained after oil quenching and temper.

Card 1/2

S/137/60/000/006/004/C15
A006/A001

The Effect of Iron on Magnetic Properties of a Copper-Cobalt Alloy

ing for 6 hours. Magnetic characteristics of an alloy containing up to 2% Fe are by 20-40% below the maximum values attainable for this alloy without Fe. It is recommended to clean the crucible carefully, if a Fe-alloy was previously melted in it, and to use a quartz mixer instead of an iron one. ✓

Ye.V.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

BEREZKIN, V.G.; PAKHOMOV, V.P.; ALISHOYEV, V.R.; STAROBINETS, L.L.; MARKOVICH,
Z.P.; SEDOV, L.N.

Some new methods of studying polymeric compounds by gas chromatography. Vysokom.soed. 7 no.1:185-187 Ja '65.

(MIRA 18:5)

MARKOVICHYUS, Sh.L. [Markovicius, S.], dotsent; SIDERAYTE, Sh.A.
[Sideraite, S.]

Clinical aspects of thyroiditis and strumitis. Klin. med. 41
no.7:99-103 J1'63 (MIRA 16:12)

1. Iz kafedry gospiatal'noy terapii (zav. L.Z.Lautsevichus)
[Laucovicius, L.] Vil'nyusskogo gosudarstvennogo universiteta
imeni V.Kapsukasa i 1-y sovetskoy klinicheskoy bol'nitsy
(glavnyy vrach V.B.Bernatskis [Bernackis, V.], Vil'nyus.

~~SECRET~~
Current information on the situation in the country.

1.1 (October 1985) - The situation in the country is as follows:

Further information on the situation in the country is as follows:
February 1986.

MARCOVICI, M.; GOROMOSOVA, Eleonora; GAGIU, Teodora, assistante technique.

Contribution to the study of poliomyelitis eradication in the city of Bucharest. Arch. roum. path. exp. microbiol. 23 no.3: 731-736 S'63

1. Travail de l'Institut "Dr. I. Cantacuzino"; Service des Enteroviroses, Bucarest.

MARKOVICS, M.; KOVACS, E.

Investigation of potential change in production of citric acid in surface and deep cultures. p. 247

A MAGYAR TUDOMÁNYOS AKADEMIA V. OKZTALAY BIOLOGIAI CSOPORTJANAK KÖZLEMENEI.
Budapest, Hungary. Vol. 3, no. 2, 1959

Monthly list of East European Accessions (EEAI). IC. Vol. 9, no. 1, Jan., 1960.

Uncl.

VAJDA, Gyorgy; MARKOVICS, Laszlo

Some problems relating to the quality of leather and shoes. Bor
cipo 13 no.3:69-73 My '63.

1. Bor- es Cipoipari Igazgatosag.

YUGOSLAVIA/Chemical Technology. Chemical Products and Their Appli- H-4
cation. Corrosion. Corrosion Control

Abs Jour : Ref Zhur - Khim., No 24, 1958, No 81938

Author : Markovic T.

Inst :

Title : The Mechanism of Iron Corrosion in Soils.

Orig. Pub : Inst. mater., 1958, 5, No 4, 147-151

Abstract : General review. Physical properties of various soils and their corrosion characteristics with respect to different metals are described. Various factors (humidity of ambient air), affecting the soil corrosion are reviewed.

Card : 1/1

SHOSHIN, A.A.; IGNAT'YEV, Ye.I.; MARKOVIN, A.P.; BYAKOV, V.P.

Present-day status of medical geography and the prospects for its
development. Mat.Kom.med.geog.Geog.ob-va SSSR pt.1:14-22 '61.
(MIRA 15:10)

(MEDICAL GEOGRAPHY)

MARKOVIN, A.P.

General problems in medical geography; a short index of the
literature in Russian. Mat.Kom.med.geog.Geog.ob-va SSSR pt.1:41-
57 '61. 'MIRA 15:10)

(BIBLIOGRAPHY--MEDICAL GEOGRAPHY)

BYAKOV, V.P.; MARKOVIN, A.P.; RACHKOV, I.M.; NOSHCHINSKIY, V.R.; IGNAT'YEV,
Ye.I.

Informational reports. Mat.Kom.med.geog.Geog.ob-va SSSR ft.1:58-
76 '61. (MIRA 15:10)

(MEDICAL GEOGRAPHY)

SHOSHIN, A.A.; IGNAT'YEV, Ye.I.; MARKOVIN, A.P.; BYAKOV, V.P.

Nature, objectives and methods of medical geography. Geog. sbor.
no.14:5-13 '61. (MIRA 15:1;

(MEDICAL GEOGRAPHY)

MARKOVIN, A.P.

Historical study of the development of medical geography in Russia.
Geog. sbor. no.14:14-28 '61. (MIRA 15:1)
(MEDICAL GEOGRAPHY)

MARKOVIN, G.I., inzh.

Effect of heat treatment on the structure and wearing capacity of
cast iron used in pistons. Trudy MIIT no.118:33-44 '58. (MIRA 12:2)

(Cast iron--Heat treatment) (Metallography)
(Pistons--Testing)

MARKOVIE, G.I.

Studying the possibilities for increasing the life of the piston rings of an engine. Trudy MIIT no.110:119-124 '59.
(MIRA 13:4)

(Piston rings) (Diesel locomotives)

MARKOVIN, G.I., inzh.

Effect of heat treatment on the thermal resistance of piston
rings. Trudy MIIT no.122:123-131 '59. (MIRA 13:5)
(Piston rings)

MARKOVIN, G. I., Cand Tech Sci (diss) - "Investigation of the possibility of increasing the service life of piston rings on locomotive engines". Moscow, 1960. 11 pp (Min Transportation USSR, Moscow Order of Lenin and Order of Labor Red Banner Inst of Railroad Transport Engineers (n I. V. Stalin), 100 copies (KL, No 14, 1960, 132)

MARKOVIN, N.P.; KIRIYENKO, B.N.; AZHONIN, A., red.

[Performance of machine-tractor units at high speeds.
Rabota mashino-traktornykh agregatov na povyshennykh
skorostiakh. Moskva, Kolos, 196.. 79 p.
(MIRA 18:12)

1. MARKOVIN, V. I.
2. USSR (600)
4. Petroglyphs - Daghestan
7. Petroglyphs in Daghestan. Izv. Vses. geog. ob-va 85 No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

MARKOVINA, N.I.

Defense of dissertations in the field of mathematics. Usp. mat. nauk
18 no.4:229-232 J1-Ag '63. (MIRA 16:9)

MARKOVITCH, D.

Markovitch, D. Sur la limite inférieure des modules des
zéros d'un polynôme. Acad. Serbe Sci. Publ. Inst. Math.
2, 236-242 (1948). (French. Serbian summary)

Let $g(r) = \sum_{k=1}^n b_k r^k$, with $b_k > 0$ for all k , be convergent
for $|r| < R$, R sufficiently large. For any zero $s = re^{i\theta}$ of
a given polynomial $f(s) = \sum_{k=0}^n a_k s^k$, one has the inequality
 $|a_0| \leq \sum_{k=1}^n |a_k| r^k$ which, if divided by the inequality
 $g(r) \leq \sum_{k=1}^n b_k r^k = g_+(r)$ yields the inequality

$$|a_0| g(r)^{-1} \leq G = \left\{ \sum_{k=1}^n |a_k/b_k| b_k r^k \right\} / g_+(r) \leq M,$$

where $M = \max |a_k/b_k|$ for $k=1, \dots, n$; for G is a mean of
the quantities $|a_k/b_k|$ for $k=1, \dots, n$. If now the b_k are
so chosen that the equation $g(r) = |a_0|/M$ has a single
positive root r_0 , this root will be a lower bound for moduli
of the zeros of $f(s)$. The author illustrates this principle
with some examples such as $b_k = k^{-t}$, $t > 0$, which leads to the
result of Landau [Tôhoku Math. J. 5, 97-116 (1914)]
that $r_0 = |a_0|/(|a_0| + M)$, where $M = \max (|a_k| k^t)$ for
 $k=1, \dots, n$. M. Marden (Milwaukee, Wis.)

Source: Mathematical Reviews,

Vol 10 No. 7

Small

Markovitch, D.

Markovitch, D. Quelques remarques sur les progressions arithmétiques. Bull. Soc. Math. Phys. Serbie 1, 17-21 (1949). (Serbian. Russian and French summaries)
 Suppose that in a sequence $\{a_n\}$ we have $\Delta^p a_n > 0$ ($p=0, 1, \dots, K$), $\Delta^{K+1} a_n = 0$ and put $S_n = a_1 + \dots + a_n$. It is shown that $(n+m)/n < S_{n+m}/S_n < (n+m)/n + (K+1)/n$.
 W. Feller (Ithaca, N. Y.).

sm

Source: Mathematical Reviews, 1950 Vol. 11 No. 2

Markovitch, D.

Markovitch, D. Sur quelques formules approchées pour la racine carrée d'un nombre. Bull. Soc. Math. Phys. Serbie 1, 71-76 (1949). (Serbian, Russian and French summaries)

Let $x^2 = N$. The author iterates the identity

$$x = (N + \lambda x) / (\lambda + x)$$

Substituting various values for λ (such as $\lambda = [N^i]$) he obtains a collection of approximations to x . W. Feller.

Heath

Markovitch, D.: On some approximate formulas for the square root of a number

Smith

Source: Mathematical Reviews, 1950 Vol 11 No. 2

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Markovitch, D.

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Markovitch, D. Extension d'un théorème de Hurwitz.
Bull. Soc. Math. Phys. Serbie 1, no. 3-4, 113-115 (1949).
(Serbian, French summary)
L'équation trinôme $1+x^p+ax^m=0$ possède au moins un
zéro dans le cercle $|x+1| \leq 1$ si p désigne un entier positif
impair ($p < m$).
From the author's summary.

MARKOVITCH, D.: Extension of a Theorem of Hurwitz

11

sm

Source: Mathematical Reviews,

Vol. 12 No. 1

MARKOVITCH, D.

Markovitch, D. Sur quelques limites du module d'une somme. Bull. Soc. Math. Phys. Serbie 2, nos. 1-2, 31-35 (1950). (Serbo-Croatian. French summary)

If $a_0, a_1, \dots, a_n$ are positive numbers, $0 < \theta < \pi$, and $r = \max(a_{k+1}/a_k)$, then

$$\sum_{k=0}^n a_k e^{ik\theta} \leq a_0 \max_{0 \leq k \leq n} [1 + r^{k+1}] / [1 - r e^{i\theta}]$$

This is proved very simply by writing the sum in the left member in the form $\sum b_k e^{ik\theta}$, where $b_k = a_k/r^k$ and $s = r \exp(i\theta)$, and then applying the Abel partial summation formula and using the fact that the b 's are positive and monotone decreasing. In case the numbers a_k are complex, the same partial summation formula is applied directly to $\sum a_k \exp(ik\theta)$ to show that it is dominated by the product of

$$|a_0 - a_1| + |a_1 - a_2| + \dots + |a_{n-1} - a_n| + |a_n|$$

and the greatest of the $n+1$ numbers $\sin \frac{1}{2}(k+1)\theta / \sin \frac{1}{2}\theta$, $k=0, 1, \dots, n$.

R. P. Agnew (Ithaca, N. Y.)

Source: Mathematical Reviews,

Vol 12 No. 6

Smw

MARKOVITCH, D.

Markovitch, D. La méthode de E. Galois et la résolution
des équations algébriques. Bull. Soc. Math. Phys.
Serbie 2, nos. 3-4, 73-80 (1950). (Serbo-Croatian,
French summary)
Expository paper.

SMW 22

Source: Mathematical Reviews,

Vol 13 No. 3

Markovitch, D.

23

*Markovitch, D. Sur le théorème de Grace. Premier Congrès des Mathématiciens et Physiciens de la R.P.F.Y., 1949. Vol. II; Communications et Exposés Scientifiques, pp. 67-71. Naučna Knjiga, Belgrade, 1951. (Serbo-Croatian. French summary)

The author gives a new proof of the theorem of Grace [Proc. Cambridge Philos. Soc. 11, 352-357 (1902)] and uses this to prove that for each fixed $r, r=1, 2, \dots, n$, every circle containing n and

$$p_k = a + r \cos \left[\frac{n P(n)}{(n-r) P'(n)} \right]^{1/n}, \quad k=1, 2, \dots, n,$$

contains at least one root of the n th degree polynomial $P(z)$.

(When $r=1$ this gives Laguerre's theorem.)

J. H. Goodman (Lexington, Ky.).

SMW

MARKOVITCH, DRAGOLJUB

Markovitch, Dragoljub. Sur un procédé de factorisation
approximative des polynômes. Bull. Soc. Math. Phys.
Serbie 6, 3-11 (1954). (Serbo-Croatian summary)
Let $a_n x^n + a_{n-1} x^{n-1} + \dots + a_1 x + 1$ be a polynomial
with real coefficients. A process is described for the
factorization of this polynomial into two approximate
factors, one of which is linear, and the conditions of
convergence are determined. The computation of the
coefficients by means of matrices is discussed.
E. Frank (Chicago, Ill.)

I - F/W

Ren

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MARKOVITS, Gyorgy, dr.

Explosive leptospirosis in the northern mountainous region,
caused by swimming pool water. Orv. hetil. 97 no.37:1014-1018
9 Sept 56.

1. A Magyar Nephadsereg Eggeszsegugyi Szolgalata es a Budapesti
Orvostudomanyi Egyetem Mikrobiologiai Intezetének (igazgato:
Alfoldy, Zoltan, dr. egyet. tanar.) kozlemenye.

(LEPTOSPIROSIS, epidemiol.

leptospiromeningitis, epidemic in Hungary in army camp
caused by infected swimming pool water (Hun))

(MENINGITIS, etiol. & pathogen.

Leptospira, epidemic in Hungary in army camp caused by
infected swimming pool water (Hun))

(ARMED FORCES PERSONNEL, dis.

leptospiromeningitis, epidemic in Hungary in army camp
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MARKOVITS, L.

Current questions of model and product designing in the shoe industry. p. 102.

BŐR ES CIPOTECHNIKA. (Boripari Tudományos Egyesület mint a Magyar Tudományos Egyesületek Szövetsége Tagegyesülete) Budapest, Hungary. Vol. 9, no. 4, Aug. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 11, November 1959.
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Correlation between the decrease of the effect of ammonium
nitrate and some soil research data. Agrochem talajtan 12
no.1:31-40 Mr '63.

1. Agrartudományi Főiskola Kémia-Talajtani Tanszéke, Mosonmagyar-
óvár.

HUNGARY / Virology. Human and Animal Viruses.

E-3

Abs Jour: Ref Zhur-Biol., No 10, 1958, 43064.

Author : Markovits, P., Biro, J.

Inst : Not given.

Title : Experimental Reproduction of Hog Cholera Viruses
in Tissue Cultures. II. Comparative Studies of
Virus Strains "Filaksiya" (Phylaxia) and "Washing-
ton."

Orig Pub: Maguar allatorv. lapja, 1956, 11, No 1012, 357-360.

Abstract: In the cultivation of "Phylaxia" strain in cultures
of hog embryo tissues (of skin, lungs, and spleen),
the infection titer up to the 15th passage attained
 10^{-4} to 10^{-6} , but diminished subsequently and after
the 30th passage infectiousness disappeared. Dif-
ferent media and different periods of cultivation
(3, 6, 24, and 72 hours) did not restore infectious-

Card 1/2

4

HUNGARY / Virology. Human and Animal Viruses.
Swine Disease Viruses.

E-3

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 90585

Authors : Markovits, P.; Biro, J.

Inst : Hungarian AS

Title : Experimental Studies on the Propagation of Swine-Fever Virus
in Tissue Culture. II. Comparative Studies of the Virus
Strains "Phylaxia" and "Washington".

Orig Pub : Acta veterin. Acad. sci. hung., 1957, 7, No. 3, 283-287.

Abstract : The strains "Phylaxia" (Hungary) and "Washington" (USA) were
cultivated in the hog embryo tissues (skin, lungs, spleen).
In the first 15 applications, the strain "Phylaxia" had a
titer of 10^{-3} - 10^{-6} . Then, the titer fell off and after
30 passages the virus was not detected. The use of differ-
ent tissues from different nutritional habitats was not re-
flected on the adaptability of the virus. The infectiosity

Card. 1/2

HUNGARY/Virology. Human and Animal Viruses. Viral Agents of Diseases E
In Swine

Abs Jour : Ref Zhur - Biol., No 4, 1959, No 14666

Author : Markovits Pal; Biro, Jenő

Inst : -

Title : The Multiplication of the Swine Plague Virus in Tissue
Culture. III. A Study of the Virulence of the Swine Plague Virus
Grown in Tissue Culture.

Orig Pub : Magyar allatorv. lapja, 1957, 12, No 11, 347-350

Abstract : The virulence of the strain "Phylaxia" decreased following
25-64 passages in a tissue culture (TC). It decreased
markedly following 66-133 passages while immunogenicity was
preserved at the same time: 98 percent of animals immunized
with this virus survived following an effective infection
with a virulent strain. A simultaneous injection of the at-
tenuated virus and of a specific antiserum considerably

Card : 1/3

HUNGARY/Virology. Human and Animal Viruses. Viral Agents of Diseases E
in Swine.

Abs Jour : Ref Zhur - Biol., No 4, 1959, No 14666

weakened the reaction which took place following infection with the virus only. Following this immunity did not decrease in the animals. The possibility of contact infection of the animals with the attenuated virus was demonstrated, under which conditions the reaction and the following immunity in the infected animals were identical to those observed in the experimentally infected ones. The virulence of the attenuated strain did not increase following passage to the organism of the swine. The "Washington" strain also underwent a change in the process of passage in the TC but to a significantly lower degree than "Phyaxia." It produced a lethal disease in 74 percent of the infected animals following 137 passages. It is easy to grow the "Washington" strain while in order to maintain the "Phylaxia" strain in

Card : 2/3

- 21 -

HUNGARY/Virology. Human and Animal Viruses. Viral Agents of Diseases E
In Swine.

Abs Jour : Ref Zhur - Biol., No 4, 1959, No 14666

T C periodical passages through the organism of the swine
are necessary. The "Yen-Sel" strain behaved in the T C
like "Phylaxia". L.S. Segal'.

Card : 3/3

MARKOVITS, Pal, dr.; KOJNOK, Janos, dr.

Recent tissue culture and its role in producing vaccines against virus diseases. Magyar allatorv lap 17:6-9 S '62.

1. Phylaxia Allami Oltoanyagtermelo Intezet, Budapest.

MARKOVITS, Pal, dr.; TÓTH, Bela, dr., az allatorvostudományok kandidátusa

Propagation of some of the vaccine strains of the fowl pest virus
in the mammalian tissue cultures. Magyar allatorv. lap 17:12-15 S '62.

1. Phylaxia Allami Oltoanyagtermelő Intézet, Budapest.

MARKOVITS, Pal, dr.

Do viruses take part in causing tumors? Elet tud 17 no.4:118-122
Ja '62.

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Propagation of Newcastle disease virus in tissue cultures.
Pt.2. Acta veter Hung 12 no.3:287-293 '62.

1. Phylaxia State Serum Institute (Director:J. Molnar), Budapest.

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The S.E. polyome-virus. Magyar allatorv lap 17 no.8:306-308 Ag '62.

1. Phylaxia Allami Oltoanyagtermelo Intezet. Igazgato: Molnar Jozsef dr.

MARKOVITS, P.; TOTH, B.

The propagation of Newcastle disease virus (NDV) in tissue cultures.
Pt. 3. Acta veter Hung 14 no.1:63-70 '64.

1. Phylaxia State Serum Institute (Director: J.Molnar), Budapest.

10TH. Bela, dr., as informostudományok kandidátusa; MAEKOVITZ, Bal, Jr.

Comparing children on the basis of the basis of
their smallest immunizing dose. May Military Med
no. 2422-49. 1964.

1. Informostudományok kandidátusa, Director
of the Medical Institute, Budapest.

BAMBERGER, K.; MARKOVITS, F.

Studies on tissue-culture-propagated turkey-pox virus. Acta
veterin. acad. sci. Hung. 15 no.2:161-165 '65

1. Veterinary Medical Research Institute (Director: J. Markovits)
of the Hungarian Academy of Sciences, Budapest, and Phylaxis
State Vaccine Institute (Director: J. Molnar), Budapest.

MARKOVITS, P.; TOTH, B.

Virus-neutralizing antibody response of ducks to immunization with virulent or attenuated hepatitis virus. Acta veterin. acad. sci. Hung. 15 no.2:205-212 '65

1. Phylaxis State Serum Institute (Director: J. Molnar), Budapest.

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TOTH, Bela, Dr., Candidate of Veterinary Sciences, CZOVEK, Laszlo, Dr., and MARKOVITS, Pal, Dr., Phylaxia State Works for Immunizing Material Production (Phylaxia Allami Oltoanyagtermelo Intezet)(location not given)(Director: MOLNAR, Jozsef, Dr.).

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Budapest, Magyar Allatorvosok Lapja, Vol 21, No 5, May 1966, pp 208-210.

Abstract: Tests with attenuated TN virus for infectious hepatitis, administered to duck breeding stock by injection or orally, showed that it is possible to confer natural immunity for several generations. Immunization demonstrably increased the amount of specific antibodies in the blood serum. 5 references, including 3 Hungarian and 2 Western.

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MARKOVNIKOV, V. L., Engineer

"Investigation of the Starting Process of a Trolley Bus Power Drive."

Sub 3 Jul 47, Moscow Automobile Highway Inst imeni V. M. Molotov

Dissertations presented for degrees in science and engineering in
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Avtomobil nye peredachi na elektricheskoy transporte. [Automobile transmission devices in electric transportation]. Moskva, Gos. nauch.-tekhn. izd-vo mashinostroit. lit-ry, 1949, 201 p. diags.
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Tekhnicheskoe obsluzhivanie troileibusov. [Technical maintenance of trolleybuses]. Moskva, izd-vo Narkomkhoza RSFSR, 1944. 75 p. diags.

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kandidat tekhnicheskikh nauk, nauchnyy redaktor; IOFFE, M.L., re-
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